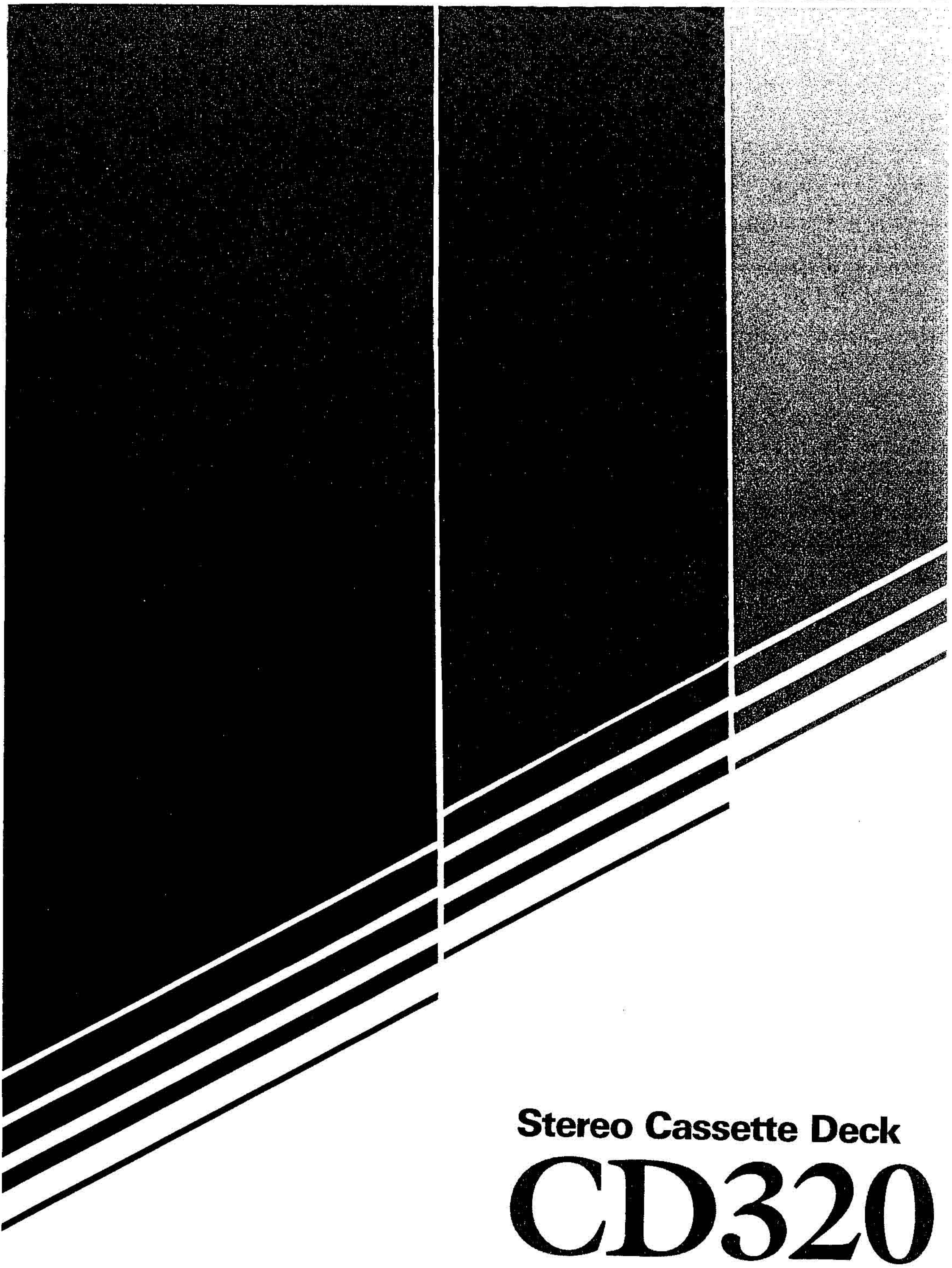
Service manual



Stereo Cassette Deck

CD320

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SPECIFICATIONS

Type	Soft touch front loading stereo cassette deck with Dolby NR system	
Track system	4 track, 2 channel stereo recording/playback	
Recording system	AC bias system (bias frequency: 85 KHz)	
Erasing system	AC system	
Tape speed	1-7/8 ips (4.76 cm/sec)	
Heads	Hard permalloy recording/playback head x 1 Double Gap erasing head x 1	
Motor	Electronic governor controlled DC motor	
Wow and flutter	Less than 0.08% (WRMS)	
Fast winding time	Approximately 120 seconds with C-60 cassette tape	
Frequency Response −20dB REC	Normal tape	25-15,000 Hz (40-13,500 Hz +1, −3dB)
	CrO_2 tape	25-16,000 Hz (40-14,000 Hz +1, −3dB)
	METAL tape	25-16,500 Hz (40-14,500 Hz +1, −3dB)
0dB REC (DOLBY NR OFF)	METAL tape	40-11,000 Hz ±3dB
Signal to noise ratio (REC/PB)	Dolby NR ON (weighted)	62dB (Normal tape) 66dB (CrO_2 tape) 65dB (Metal tape)
	Dolby NR OFF (weighted)	53dB (Normal tape) 57dB (CrO_2 tape) 56dB (Metal tape)
Total harmonic distortion	Less than 1.0% at 1 KHz, 0dB REC	
Input sensitivity/Impedance	MIC 1.0mV/600-2.7K ohms LINE 70mV/47K ohms	
Output level/Impedance	LINE 450mV/1.0K ohms	
Built-in features	Dolby NR system (B type) with Dolby NR INDICATOR Full auto stop mechanism in all modes Soft eject cassette door with air damper Mechanical Soft touch transport with PLAY, REC, PAUSE indicators 2color LED peak display 3 step tape selector (NORM, CrO_2, METAL)	
Power consumption	11 Watts	
Dimensions	440(W) x 110(H) x 70(D) mm 17.3(W) x 4.3(H) x 2.7(D) inches 2.9Kg/6.4Lbs	

NOTE: Design and specifications subject to change without notice for improvements.

ELECTRICAL ADJUSTMENT PROCEDURE

To make the adjustments the following instruments are necessary:
*High sensitivity AC voltmeter
*Audio frequency Oscillator
*Attenuator
*Oscilloscope
*Distortion meter
*Wow and flutter meter w/frequency counter
*CCIR/ARM noise weighting filter
*Test tape

I. TAPE SPEED

1. Connect the wow and flutter meter to OUTPUT terminals.
2. Play back the 3KHz, − 10dB signal of the test tape(MTT-111).
3. Insert a small-screwdriver into the adjustment hole(= behind of the motor), and adjust the semifixed resistor till the wow and flutter meter reads 3KHz.
   * If the speed is low, turn the resistor clockwise.
   * If the speed is high, turn it counter-clockwise.

II. HEAD AZIMUTH(Fig. 1)

1. Set the TAPE selector to NORM.
2. Connect the voltmeter and oscilloscope to OUTPUT terminals.
3. Play back the 10KHz, − 10dB signal of the test tape. (MTT-114)
4. Observing the voltmeter, turn screw(REC / P. B head adjusting screw)to maximize the signal on both the left and right channels.
5. After adjustment, be sure to lock screw so that it cannot move

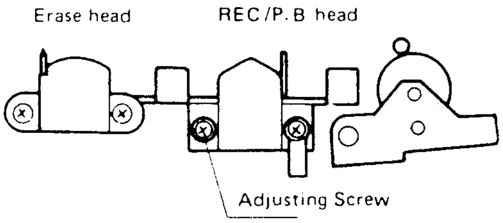


Fig. 1

III. PLAYBACK LEVEL

1. Connect the voltmeter oscilloscope to the OUTPUT terminals.
2. Switch the DOLBY NR switch OFF.
3. Playback the 400Hz, 0dB(= 0.560V) signal of the test tape(MTT-150).
4. VR101R(right)and VR101L(left) should be adjusted till the voltmeter read is 0.560V.

IV. ADJUST THE BIAS TRAP AND TRAP FILTER

1. Put the Deck in the RECORD mode and set the input level controls to their minimum position.
2. Set the tape selector to “METAL”position.
3. Connect the frequency counter to TP. 1R(or 1L).
4. Adjust L301 until the bias frequency is read 85KHz.
5. Connect the voltmeter and oscilloscope to TP. 4R(right) and TP. 4L(left) on the REC amplifier.
6. Adjust L202R(right)and L202L(left)until the output of the bias wave form is minimized.

7. Connect the voltmeter and oscilloscope to the output terminal.
8. Adjust the L201R(right) and L201L(left) to minimize the signal coming out of the OUTPUT terminals.

V. RECORDING BIAS

1. Set the REC input level controls to their minimum positions and put the DECK in the REC mode.
2. Set the tape selector to "NORM"
3. Connect the voltmeter to TP. 1R(right) and TP. 1L(left) on the PB amplifier.
4. Adjust VR301R(right) and VR301L(left) until the voltmeter reads 3. 2mV(= 320uA).

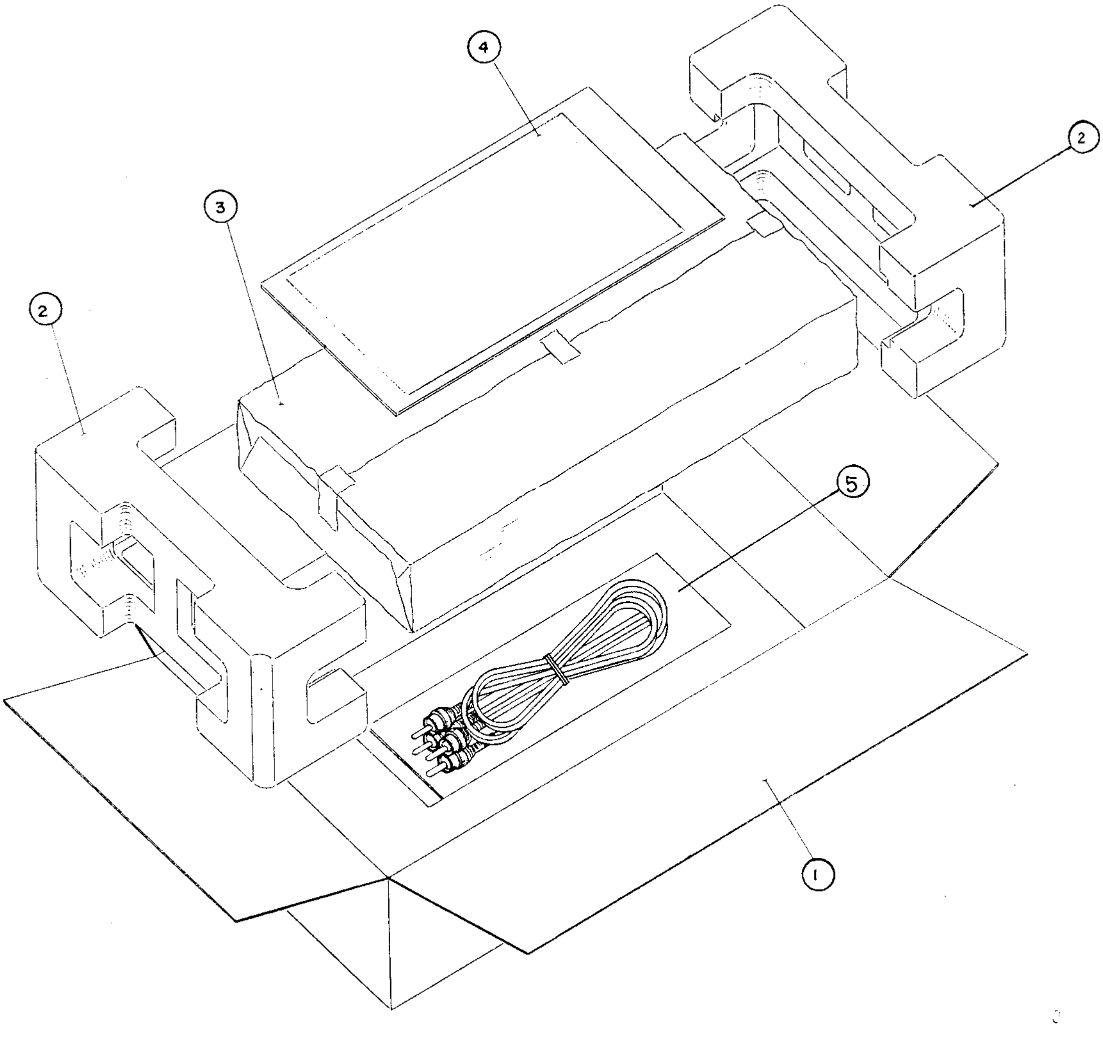
   ∗ CrO_2 : Adjust VR302 until the voltmeter reads 4. 2mV(= 420uA).
   ∗ METAL: Adjust VR303 until the voltmeter reads 7. 5mV(= 750uA).

VI. RECORDING LEVEL

1. Apply a 400Hz signal to the INPUT terminals(= line input) and put the deck in the REC mode.
2. Connect the voltmeter and oscilloscope to the OUTPUT terminals.
3. Adjust the REC attenuator controls until the OUTPUT from the OUTPUT terminals is 0dB(= 0. 560V).
4. Connect the voltmeter to TP. 3R(right) and TP. 3L(left) on the REC amplifier.
5. Set the tape selector to "NORM".
6. Adjust VR201R(right) and VR201L(left) until the voltmeter reads approximately 0dB when playing back a recording made at full modulation (voltmeter at 0dB), full level is measured.

PACKING

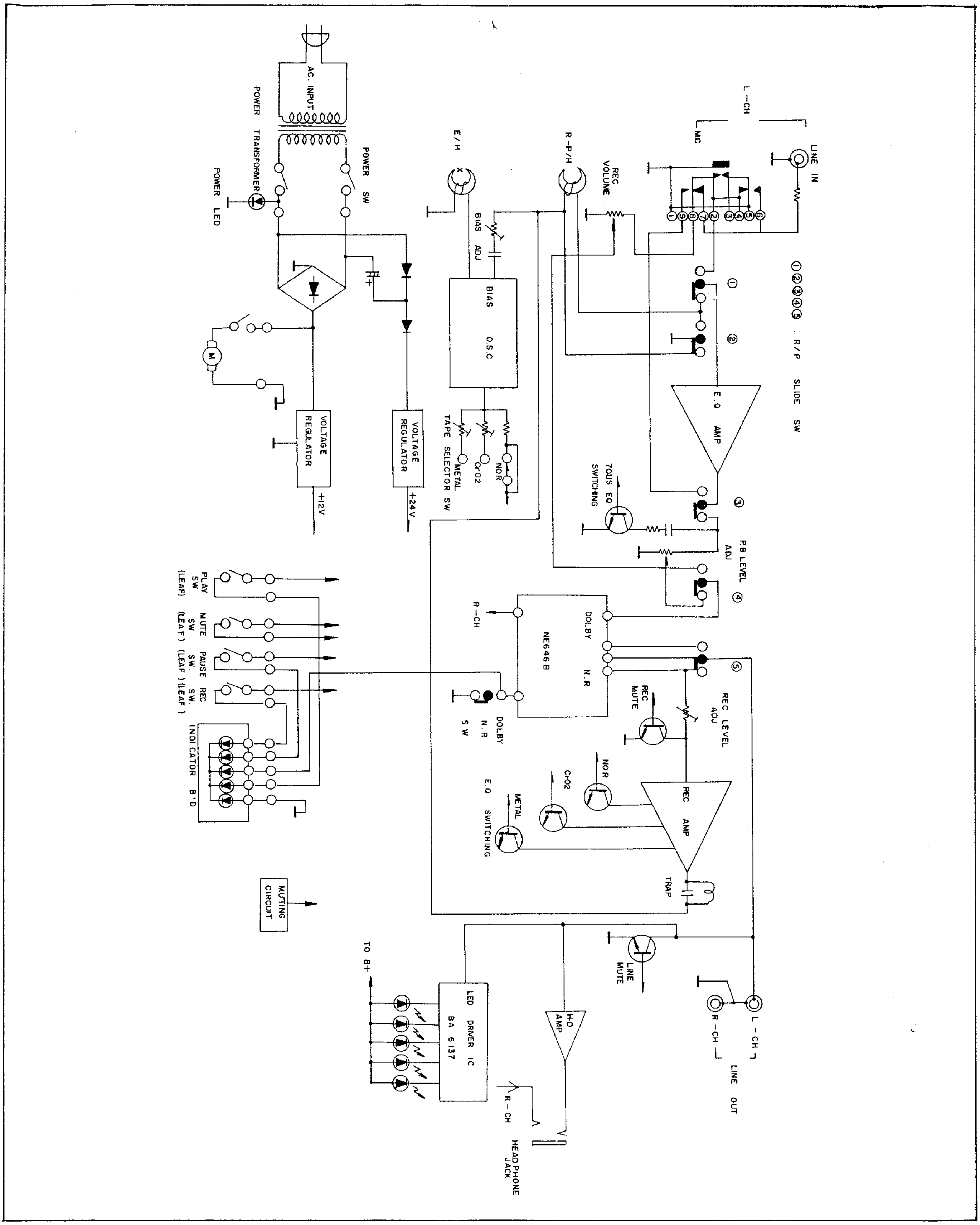
NO.	PARTS NO.	DESCRIPTION
1	049605052104	CARTON BOX
2	9722008310	POLY CUSHION
3	9715000110	FILM SOFT PE
4	9007010432	OPERATING MANUAL
5	4328200410	RCA CORD



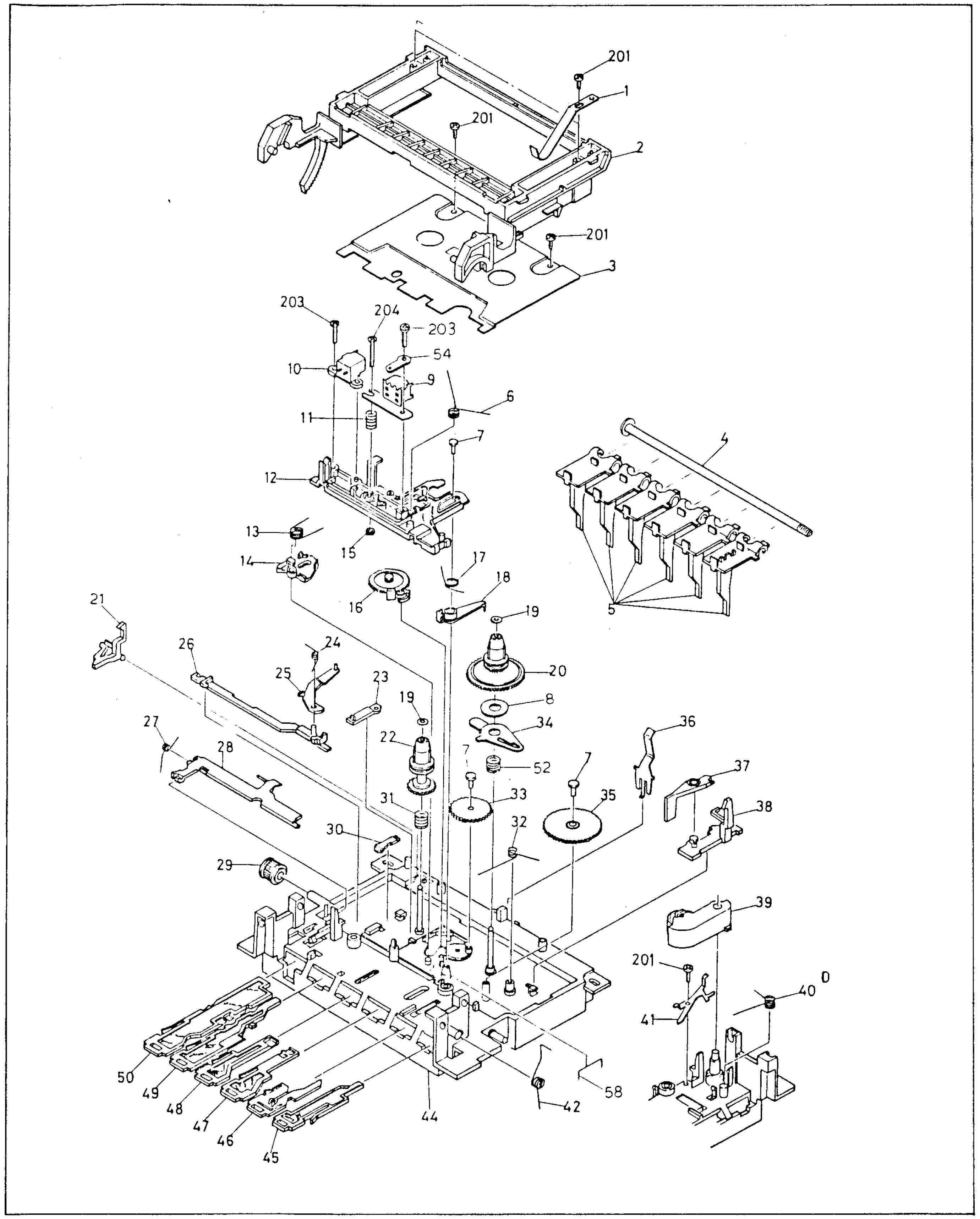
PARTS LIST ACCORDING TO DECK MECHANISM ASS'Y

NO.	PARTS NO.	DESCRIPTION	Q'TY
1	PBE14715	KEEP PLATE	2
2	PBC1146	C CASE	1
4	PBE15901	BUTTON SHAFT	1
5	PBE2960	BUTTON LEVER	1
6	PBE6354	SPRING	1
7	PBE14927	BUSH	7
8	PBE16459	FELT WASHER	1
9	H233401	R/P HEAD	1
10	H432201	ERASE HEAD	1
11	PBE13666	C. SPRING	1
12	PBC1145	HEAD BASE	1
13	PBE6508	SPRING	1
14	PBE15920	F. R LEVER	1
15	PGNH22120	NUT	1
16	PBE02163	P. IDLER ASS'Y	1
17	PBE6384	SPRING	1
18	PBE15577	RESET LEVER	1
19	PGWM16X40020	WASHER	2
20	PBE02161	T. REEL ASS'Y	1
21	PBD1801	INTER LOCK PLATE	1
22	PBE02162	S. REEL ASS'Y	1
23	PBE15574	F. R UNLOCK LEVER	1
24	PBE6557	SPRING	1
25	PBE15576	P UNLOCK LEVER	1
26	PBE1796	PL LOCK PLATE	1
27	PBE6349	SPRING	1
28	PBD1797	F. R LOCK PLATE	1
29	PBE15524	GEAR	1
30	PBE15578	REC COVER PLATE	1
31	PBE6517	S BRAKE SPRING	1
32	PBE6350	SPRING	1
33	PBE15585	F IDLER GEAR	1
34	PBE15589	SENSER CAM	1
35	PBE15582	AS GEAR	1
36	PBE15945	CASSETTE HOLDER	1
37	PBE15565	EJECT CAM	1
38	PBD1805	LATCH LEVER	1
39	PBE02164	PINCH ARM ASS'Y	1
40	PBE6394	SPRING	1
41	PBE15570	EARTH LUG	1
42	PBE6518	SPRING	1
44	PBD0783	CHASSIS ASS'Y	1
45	PBE15557	SE LEVER	1
46	PBD1793	PAUSE LEVER	1
47	PBE15923	FF LEVER	1
48	PBE15924	REW LEVER	1
49	PBE15952	PL LEVER B	1
50	PBD1798	REC LEVER	1
52	PBE6552	SPRING	1
54	PBE14710	EARTH LUG	1
55	MSW1598	LEAF SWITCH	1
58	PBE15801	LOCK PIN	1
60	PBE15939	CAPSTAN SUPPORT	1
62	PBE5083	BELT	2
63	PBD0782	FLY WHEEL ASS'Y	1
64	PGWP21X040013	WASHER	1
65	PBE15561	GEAR HOLDER	1
66	PBE6532	T. SPRING	1
67	EG500AD2B	MOTOR	1
68	PBE15938	MOTOR PLATE	1
69	PBE15599	PULLEY	1
71	PBD0818	F. R IDLER ARM ASS'Y	1
72	PBE6346	SPRING	1
73	PBD1791	ASSIST GEAR A	1
74	PBE15955	ASSIST GEAR B	1
75	PBE6342	SPRING	1
76	PBE15566	P CAM LEVER	1
78	MSW1557NBK	LEAF SWITCH	1
79	PBD1792	CR CAM LEVER	1
80	PBE6344	SPRING	1
81	PBD1833	FR START LEVER	1
82	PBD1834	FRS LEVER	1
83	PBE15588	PROTECT PLATE	1
84	PBE6343	SPRING	1
85	PBE15569	REC JOINT PLATE	1
86	PBE6341	SPRING	1
87	H580714	LEAF SWITCH	1
88	PBE15579	MSW LEVER	1
89	PBE6355	T. SPRING	1
90	PBE15563	REC CHANGE PLATE	1
91	PBE15562	PL START LEVER	1
92	PBE15893	SUPPORT PLATE	1
93	PBE6348	SPRING	1
96	PBE15571	RSW LEVER	3
98	PBE16447	SWITCH BRACKET	1
99	HSN135	LEAF SWITCH	1
100	H5822	LEAF SWITCH	1
101	MSW0094	LEAF SWITCH	1
201	PGST20A2005	TAPPING SCREW	5
203	PGST20A2008	TAPPING SCREW	2
204	PGSP20A2010	SCREW	1
208	PGST15A2606	F TAPPING SCREW	3
209	PGSP11A2604	SCREW	2
210	PGSD10A2604	D SCREW	1
211	PGSD10A2606	TAPPING SCREW	2
212	PGSD10A1706	D SCREW	2

BLOCK DIAGRAM


AC. INPUT
POWER TRANSFORMER
POWER SW
POWER LED
M
VOLTAGE REGULATOR
+12V
VOLTAGE REGULATOR
+24V
E/H
R-P/H
BIAS ADJ
BIAS O.S.C
NOR
CrO2
METAL
TAPE SELECTOR SW
REC VOLUME
L-CH
MIC
LINE IN
①②③④⑤ : R/P SLIDE SW
E.Q AMP
70μS EQ SWITCHING
PB LEVEL ADJ
DOLBY N.R
NE646B
R-CH
DOLBY N.R SW
REC LEVEL ADJ
REC MUTE
REC AMP
NOR
CrO2
METAL
E.Q SWITCHING
TRAP
PLAY SW (LEAF)
MUTE SW. (LEAF)
PAUSE SW. (LEAF)
REC SW. (LEAF)
INDI CATOR B'D
MUTING CIRCUIT
LINE MUTE
L-CH
R-CH
LINE OUT
TO B+
LED DRIVER IC BA 6137
H-D AMP
R-CH
HEADPHONE JACK

EXPLODED VIEW OF DECK MECHANISM ASS'Y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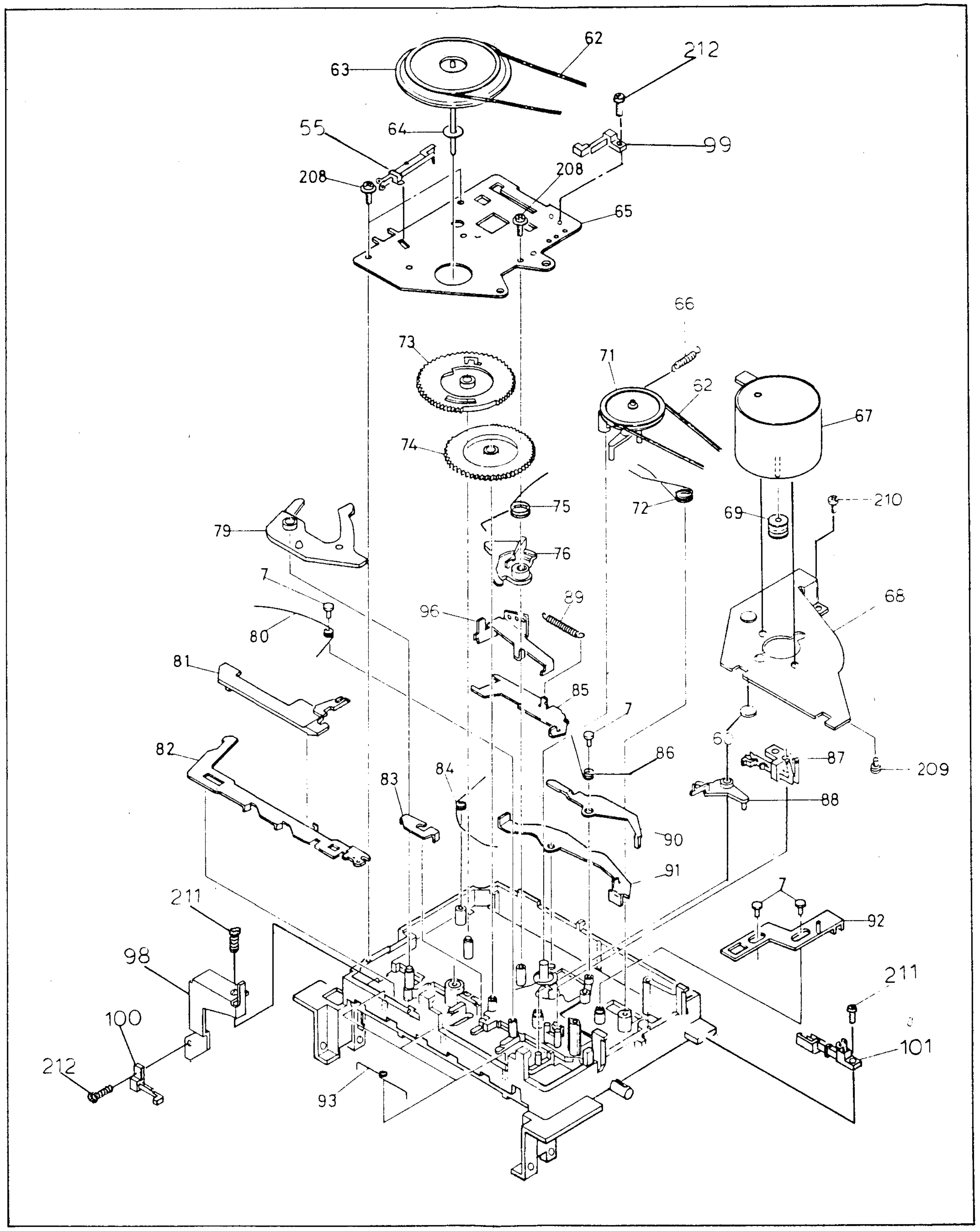
EXPLODED VIEW OF DECK MECHANISM ASS'Y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PARTS LIST

MAIN BOARD 4002312500

Ref. No.	Parts No.	Description	Q'ty
IC201L/R	2168012100	IC NE646B	2
IC301	2168600102	IC L 17812 CV	1
Q101L/R	2008606108	Transistor KTC2240BL	4
Q102L/R			
Q103L/R	2008606104	Transistor KTC1815Y	15
Q201L/R			
Q202L/R			
Q203L/R			
Q204L/R			
Q205L/R			
Q303 L/R			
Q206L/R			
Q302	2008606105	Transistor KTA1015Y	1
Q301,Q304	2008609101	Transistor MPS A05	3
Q305			
D201L/R	2058306101	Diode 1N4148	4
D313,D314			
D301, D302	2058106100	Diode 1N4002	6
D303,D304			
D305,D306			
D307 L/R	2058513113	Diode Zener RD24EB4	1
L201L/R	2658501050	Coil Rec. Trap	4
L202L/R			
L301	2638601080	Coil OSC Rec.	1
L203L/R	2648601310	Coil Inductor 4. 5mH	2
VR101L/R	3248322320	Semifixed Resistor 22K ohm(B)	4
VR201L/R			
VR301L/R	3248310420	Semifixed Resistor 100K ohm(B)	2
VR302	3248310220	Semifixed Resistor 1K ohm(B)	1
VR303	3248133130	Semifixed Resistor MG330(B)	1
R101L/R	3069333270	Resistor Carbon Film 33K ohm¼W	3
R121			
R102L/R	3069100270	Resistor Carbon Film 10 ohm¼W	5
R212L/R			
R314			
R103L/R	3069272270	Resistor Carbon Film 2.7K ohm¼W	8
R110L/R			
R214L/R			
R215L/R			
R104L/R	3069104270	Resistor Carbon Film 100K ohm¼W	2
R105L/R	3069274270	Resistor Carbon Film 270K ohm¼W	4
R204L/R			
R106L/R	3069221270	Resistor Carbon Film 220 ohm¼W	2
R107L/R	3069471270	Resistor Carbon Film 470 ohm¼W	2
R108L/R	3069331270	Resistor Carbon Film 330ohm¼W	4
R113L/R			
R109L/R	3069124270	Resistor Carbon Film 120K ohm¼W	2
R111L/R	3069152270	Resistor Carbon Film 1.5K ohm¼W	2
R112L/R	3069101270	Resistor Carbon Film 100ohm¼W	2
R114L/R	3069394270	Resistor Carbon Film 390K ohm¼W	2
R115L/R	3069153270	Resistor Carbon Film 15K ohm¼W	2
R116L/R	3069183270	Resistor Carbon Film 18K ohm¼W	2
R117L/R	3069332270	Resistor Carbon Film 3.3K ohm¼W	8
R206L/R			
R218L/R			
R220L/R			
R118L/R	3069472270	Resistor Carbon Film 4.7K ohm¼W	4
R224L/R			
R119L/R	3069105270	Resistor Carbon Film 1M ohm¼W	2
R120L/R	3069103270	Resistor Carbon Film 10K ohm¼W	18
R210L/R			
R211L/R			
R226L/R			
R227L/R			
R228L/R			
R229,R230			
R231,R307			
R308,R309			
R122	3069562270	Resistor Carbon Film 5.6K ohm¼W	1
R201L/R	3069102270	Resistor Carbon Film 1K ohm¼W	11
R202L/R			
R208L/R			
R304,R305			
R311,R326			
R333			
R203L/R	3069184270	Resistor Carbon Film 180K ohm¼W	2
R205L/R	3069473270	Resistor Carbon Film 47K ohm¼W	8
R213L/R			
R306,R329			
R330,R331			
R207L/R	3069181270	Resistor Carbon Film 180ohm¼W	2
R209L/R	3069222270	Resistor Carbon Film 2.2K ohm¼W	6
R223 L/R			
R233L/R			
R212L/R	3069392270	Resistor Carbon Film 3.9K ohm¼W	2
R216L/R	3069224270	Resistor Carbon Film 220K ohm¼W	2
R217L/R	3069822270	Resistor Carbon Film 8.2K ohm¼W	2
R219L/R	3069150270	Resistor Carbon Film 15 ohm¼W	2
R221L/R	3069123270	Resistor Carbon Film 12K ohm¼W	4
R312,R313			
R225L/R	3069220270	Resistor Carbon Film 22ohm¼W	2
R301,R302	3069391270	Resistor Carbon Film 390ohm¼W	2
R303	3039220472	Resistor Metal Oxide 22 ohm1W	1
R310,R315	3069132270	Resistor Carbon Film 1.3K ohm¼W	2
R328	3039331472	Resistor Metal Oxide 330ohm1W	1
C102L/R	3409247031	Capacitor Elect. 47μF/16WV	5
C202L/R			
C111			
C104L/R	3409247971	Capacitor Elect. 4.7μF/50WV	6
C218L/R			
C222L/R			
C105L/R	3409210971	Capacitor Elect. 1μF/50WV	5
C211L/R			
C310			
C107L/R	3409233031	Capacitor Elect. 33μF/16WV	4
C221L/R			

PARTS LIST

Ref. No.	Parts No.	Description	Q'ty
C201L/R	3409222131	Capacitor Elect. 220μF/16WV	2
C203L/R	3409233871	Capacitor Elect. 0.33μF/50WV	4
C219L/R			
C204L/R	3409210871	Capacitor Elect. 0. 1μF/50WV	2
C205L/R	3409210071	Capacitor Elect. 10μF/50WV	14
C208L/R			
C212L/R			
C214L/R			
C215L/R			
C216L/R			
C228,C307			
C301	3409233141	Capacitor Elect. 330μF/25WV	1
C303,C304	3409222141	Capacitor Elect. 220μF/25WV	2
C305	3409247141	Capacitor Elect. 470μF/25 WV	1
C306	3409210141	Capacitor Elect. 100μF/25WV	1
C302	3409222161	Capacitor Elect. 220μF/35WV	1
C101L/R	3609472120	Capacitor Mylar 0.0047 μF/100WV	4
C209L/R			
C108L/R	3609103120	Capacitor Mylar 0. 01μF/100WV	7
C220L/R			
C224L/R			
C316			
C109L/R	3609822120	Capacitor Mylar 0.0082μF/100WV	4
C308,C309			
C110L/R	3609153120	Capacitor Mylar 0.015μF/100WV	6
C223L/R			
C226L/R			
C206L/R	3609473120	Capacitor Mylar 0.047μF/100WV	2
C207L/R	3609332120	Capacitor Mylar 0.0033μF/100WV	2
C210L/R	3609273120	Capacitor Mylar 0.027μF/100WV	2
C213L/R	3609562120	Capacitor Mylar 0.0056μF/100WV	2
C217L/R	3609682120	Capacitor Mylar 0.0068μF/100WV	2
C225L/R	3609223120	Capacitor Mylar 0.022μF/100WV	2
C227L/R	3609183120	Capacitor Mylar 0.018μF/100WV	2
C112L/R	3619681110	Capacitor Poly 680PF/50WV	2
C311	3619682130	Capacitor Poly 6800PF/160WV	1
C312L/R	3619471110	Capacitor Poly 470PF/50WV	2
C103L/R	3509221130	Capacitor Ceramic 220PF/50WV	2
C106L/R	3509101130	Capacitor Ceramic 100PF/50WV	2

HEAD PHONE BOARD 4003311010

Ref. No.	Parts No.	Description	Q'ty
Q501L/R	2008606104	Transistor KTC1815Y	2
R501L/R	3069470270	Resistor Carbon Film 47ohm¼W	2
R502L/R	3069472270	Resistor Carbon Film 4.7K ohm¼W	2
R503L/R	3069471270	Resistor Carbon Film 470 ohm ¼W	2
R504L/R	3069331270	Resistor Carbon Film 3.3K ohm¼W	2
R505L/R	3069223270	Resistor Carbon Film 22K ohm¼W	2
R506L/R	3069272270	Resistor Carbon Film 2.7K ohm¼W	2
C501L/R	3409210071	Capacitor Elect. 10μF/50WV	2
C503L/R	3409247971	Capacitor Elect. 4.7μF/50WV	2
C502L/R	3509102130	Capacitor Ceramic 0. 001μF/50WV	2

LED BOARD 4003311000

Ref. No.	Parts No.	Description	Q'ty
R601L/R	3069332270	Resirtor Carbon Film 3.3K ohm¼W	2
R602L/R	3069822270	Resistor Carbon Film 8.2K ohm¼W	2
R603L/R	3069103270	Resistor Carbon Film 10K ohm¼W	2
R604	3069101270	Resistor Carbon Film 100ohm¼W	1
C601L/R	340920971	Capacitor Elect. 1μF/50WV	2
C602L/R	340927971	Capacitor Elect. 4.7μF/50WV	2
IC601L/R	2168022103	IC BA6137	2
D501,D503	2308220321	LED SLB-72 GGHL	6
D601L/R			
D602L/R			
D502,D504	2308220126	LED SLB-72 URHL	8
D603L/R			
D604L/R			
D605L/R			

FUSE BOARD 4003311020 1

Ref. No.	Parts No.	Description	Q'ty
C701	3549472407	Capacitor Ceramic 0. 0047μF/400VAC	1
F701	5508211531	Fuse 0.4A/250V For UL	1
	5508300734	Fuse T 0.1A/250V For Europe	1

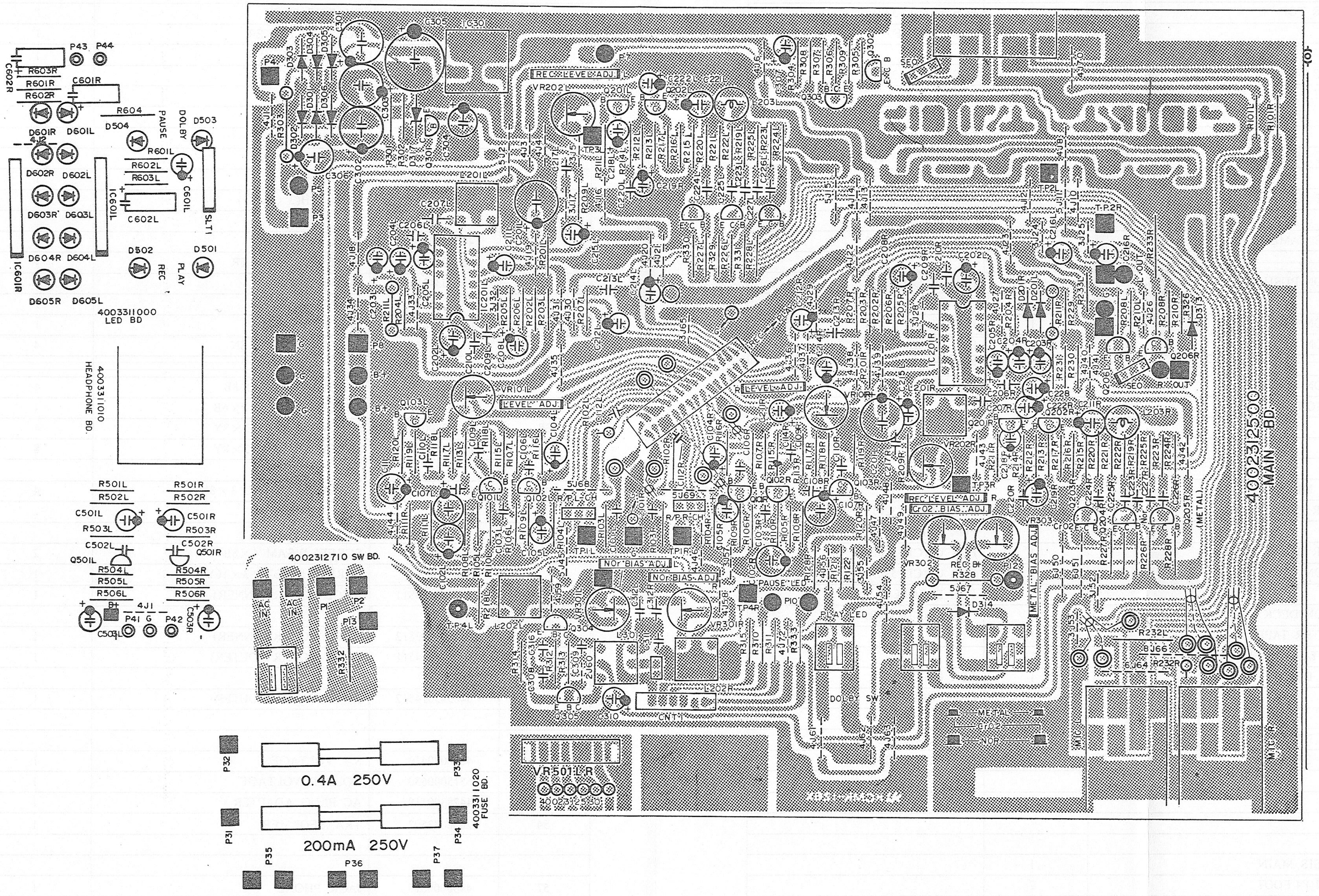
S.W BOARD 4002312510

Ref. No.	Parts No.	Description	Q'ty
R332	3609132270	Resistor Carbon Film 1.3K ohm¼W	1

CHASSIS MTG

Ref. No.	Parts No.	Description	Q'ty
D701	2308220111	LED SLB15UR3RD	1
	2828033502	Power Transformer	1

TOP VIEW OF P.C. BOARDS


4003311000
LED BD
4003311010
HEADPHONE BD.
4002312710 SW BD.
4003311020
FUSE BD.
0.4A 250V
200mA 250V
4002312500
MAIN BD.
REC LEVEL ADJ
LEVEL ADJ
NOR BIAS ADJ
CrO2 BIAS ADJ
METAL BIAS ADJ
PAUSE LED
DOLBY SW
VR501L.R
METAL
CrO2
NOR
DOLBY
PAUSE
REC
PLAY

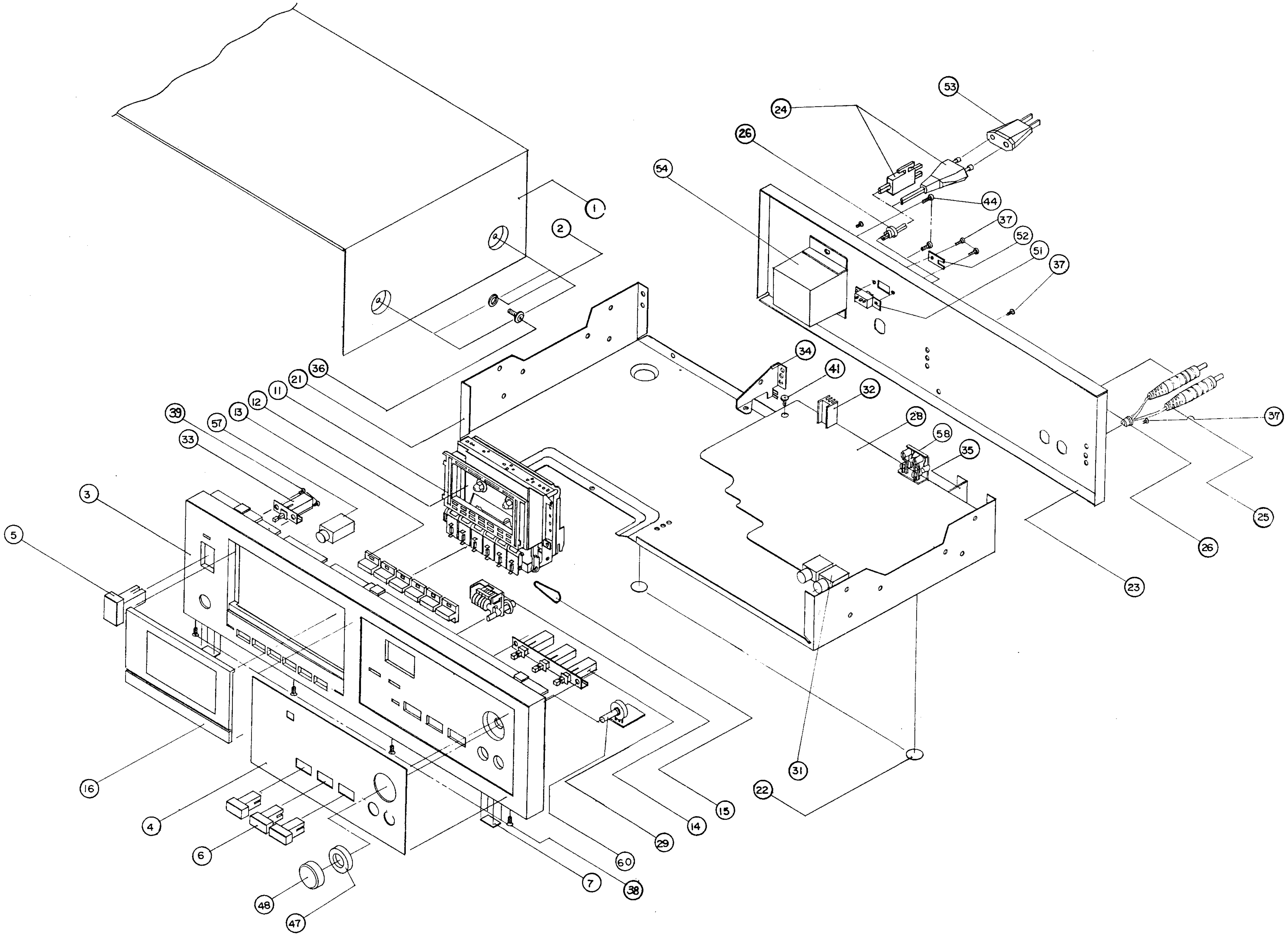
PARTS LIST ACCORDING TO EXPLODED VIEW

NO.	PARTS NO.	DESCRIPTION	Q'TY	REMARKS
1	046122007811	COVER TOP	1	FOR UL(CD-320),
				FOR EUROPE
	046122007813	COVER TOP	1	FOR UL(CD-320B)
2	8305000510	WASHER VINYL	6	
3	048501001912	PANEL FRONT	1	FOR UL(CD-320),
				FOR EUROPE
	048501001914	PANEL FRONT	1	FOR UL(CD-320B)
4	048533001211	PLATE NAME	1	FOR UL(CD-320),
				FOR EUROPE
	048533001212	PLATE NAME	1	FOR UL(CD-320B)
5	048543003211	BUTTON PUSH	1	FOR UL(CD-320),
				FOR EUROPE
	048543003212	BUTTON PUSH	1	FOR UL(CD-320B)
6	048543003311	BUTTON PUSH	3	FOR UL(CD-320),
				FOR EUROPE
	048543003312	BUTTON PUSH	1	FOR UL(CD-320B)
7	6725000810	CUSHION FOOT	2	
8				
9				
10				
11	5708003510	DECK MECHA	1	
12	048683000411	COVER DECK MECHA	1	FOR UL(CD-320),
				FOR EUROPE
	048683000412	COVER DECK MECHA	1	FOR UL(CD-320B),
13	048543003711	BUTTON DECK	6	FOR UL(CD-320),
				FOR EUROPE
	048543003712	BUTTON DECK	6	FOR UL(CD-320B)
14	5318001210	COUNTER TAPE	1	
15	7165001110	BELT TAPE COUNTER	1	
16	048563001313	DOOR DECK	1	FOR UL(CD-320),
				FOR EUROPE
	048563001315	DOOR DECK	1	FOR DOMESTIC
	048563001317	DOOR DECK	1	FOR UL(CD-320B)
21	6122609410	CHASSIS MAIN	1	
22	6725000910	CUSHION FOOT	2	
23	046102014211	CHASSIS BACK	1	FOR UL(CD-320)
	046102014212	CHASSIS BACK	1	FOR DOMESTIC
	046102014214	CHASSIS BACK	1	FOR UL(CD-320B)

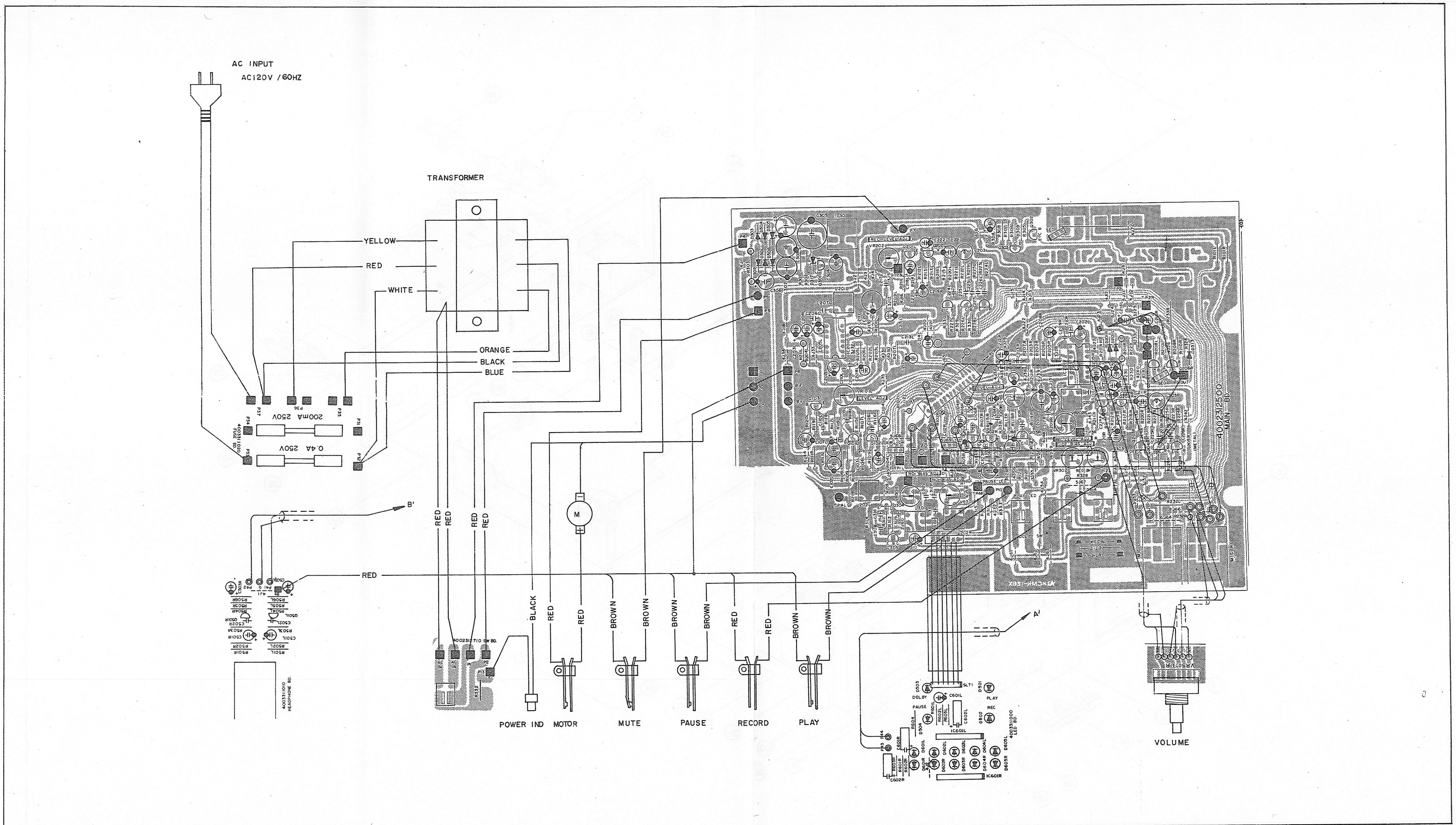
PARTS LIST ACCORDING TO EXPLODED VIEW

NO.	PARTS NO.	DESCRIPTION	Q'TY	REMARKS
	046102014215	CHASSIS BACK	1	FOR EUROPE
24	4308000220	CORD AC POWER	1	FOR UL(CD-320, CD-320B),
	4308000810	CORD AC POWER	1	FOR DOMESTIC
	4308000430	CORD AC POWER	1	FOR EUROPE
25	4328200720	CORD PATCH	1	
26	6518000111	STOPPER CORD	1	FOR UL, EUROPE
	6513000310	STOPPER CORD	1	FOR DOMESTIC
27	6715001310	SPONGE RUBBER	1	
28	4002312500	PCB MAIN	1	
29	4628034710	SW PUSH(3 GANG)	1	
31	4438000710	JACK MIC	2	
32	7505201920	HEAT SINK REG TR	1	
33	4628034310	SW PUSH	1	
34	6505053810	BKT PCB(L)	1	
35	6505053820	BKT PCB(R)	1	
36	8159440084	SCREW WSAM4×8N	4	FOR UL(CD-320),
				FOR EUROPE
	8159440083	SCREW WSAM 4×8B	4	FOR UL(CD-320B),
37	8119330063	SCREW ♯3 PTC 3×6B	4	
38	8109330081	SCREW ♯3 BTC 3×8Y	4	
39	8109230081	SCREW ♯2 BTC 3×8Y	8	
41	8159230081	SCREW ♯2 WPTC 3×8Y	4	
44	8159440083	SCREW WSAM 4×8B	2	
	8109230161	SCREW ♯2 BTC 3×16Y	1	
47	048543003811	KNOB ROTARY(INNER)	1	FOR UL(CD-320),
				FOR EUROPE
	048543003812	KNOB ROTARY(INNER)	1	FOR UL(CD-320B)
48	048545014511	KNOB ROTARY(OUTER)	1	FOR UL(CD-320),
				FOR EUROPE
	048545014512	KNOB ROTARY(OUTER)	1	FOR UL(CD-320B)
51	4618000410	SW VOLTAGE	1	ONLY FOR DOMESTIC
52	6515000630	HOLDER VOLTAGE	1	ONLY FOR DOMESTIC
53	4428300119	AC PLUG ADAPTER	1	ONLY FOR DOMESTIC
54	2828033502	TRANSFORMER	1	
57	4438000810	JACK PHONE	1	
58	4438100410	JACK RCA(4P)	1	
	6705000750	SPACING	1	
60	3228010510	VR ϕ16 50KA×2K 25	1	

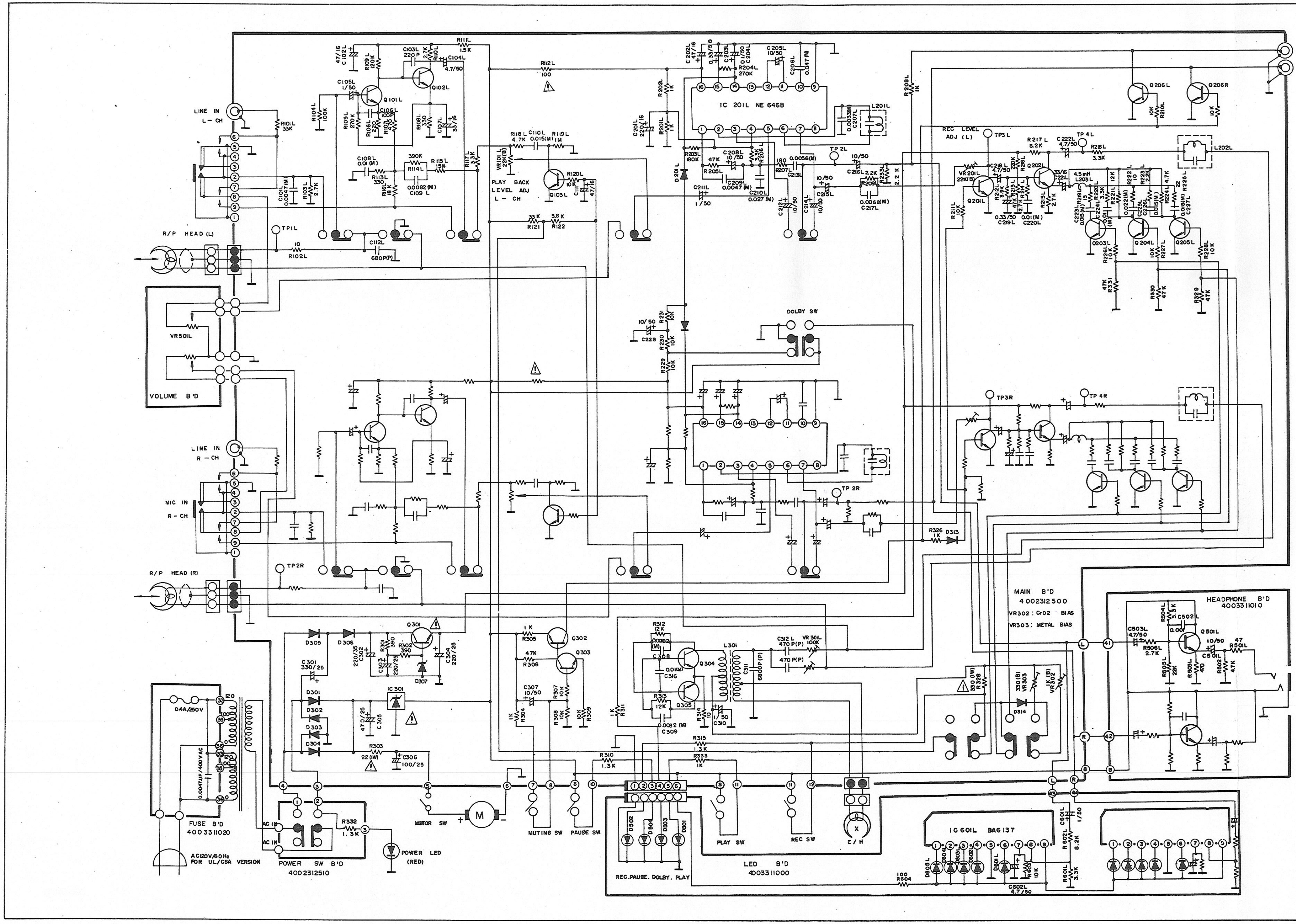
EXPLODED VIEW OF CABINET AND CHASSIS


53
24
26
54
1
44
37
52
2
51
37
34
41
36
32
21
11
28
12
39
57
13
37
58
33
35
3
5
25
26
23
16
31
22
15
4
14
29
6
60
7
38
48
47

POINT TO POINT WIRING DIAGRAM


AC INPUT
AC120V / 60HZ
TRANSFORMER
YELLOW
RED
WHITE
ORANGE
BLACK
BLUE
200mA 250V
0.4A 250V
B'
RED
RED
RED
RED
RED
M
BLACK
RED
RED
BROWN
BROWN
BROWN
BROWN
RED
RED
BROWN
BROWN
POWER IND
MOTOR
MUTE
PAUSE
RECORD
PLAY
A'
VOLUME
VR501
400231250 MAIN BD.
DOLBY
PAUSE
PLAY
REC
HEADPHONE BD.

SCHEMATIC DIAGRAM


LINE IN L-CH
R/P HEAD (L)
VOLUME B'D
VR501L
LINE IN R-CH
MIC IN R-CH
R/P HEAD (R)
TP1L
TP2R
Q101L
Q102L
Q103L
PLAY BACK LEVEL ADJ L-CH
VR101L
IC 201L NE 6468
L201L
L202L
REC LEVEL ADJ (L)
VR201L
TP3L
TP4L
TP2L
TP3R
TP4R
TP 2R
Q201L
Q202L
Q203L
Q204L
Q205L
Q206L
Q206R
LINE OUT
L
R
DOLBY SW
D313
MAIN B'D
4002312500
VR302 : CrO2 BIAS
VR303 : METAL BIAS
HEADPHONE B'D
4003311010
Q501L
Q301
Q302
Q303
Q304
Q305
IC301
L301
VR301L
D301
D302
D303
D304
D305
D306
D307
D314
FUSE B'D
4003311020
0.4A/250V
AC120V/60Hz FOR UL/CSA VERSION
POWER SW B'D
4002312510
POWER LED (RED)
MOTOR SW
M
MUTING SW
PAUSE SW
PLAY SW
REC SW
E/H
REC.PAUSE. DOLBY. PLAY
LED B'D
4003311000
IC601L BA6137

NOTE 1. RESISTANCE VALUES ARE INDICATED IN OHMS UNLESS OTHERWISE SPECIFIED.
(K=1,000 , M = 1,000,000)

2. CAPACITANCE VALUES ARE SHOWN IN MICROFARADS UNLESS OTHERWISE NOTED.
(P=MICRO—MICROFARADS)

3. COMPONENT VALUES ARE SUBJECT TO CHANGE WITHOUT NOTICES.

4. ALL VOLTAGES ARE REFERENCED TO GROUND UNDER THE FOLLOWING CONDITIONS :
DC : NO SIGNAL EXCEPT WHERE INDICATED
AC : R M S
▭ : DOLBY LEVEL TAPE : TEAC MTT—150

5. THE ⚠ MARK FOUND ON SOME COMPONENT PARTS INDICATES THE IMPORTANCE OF THE SAFETY FACTORS OF THE PARTS. THEREFORE, WHEN REPLACING, BE SURE TO USE PARTS OF IDENTIAL DESIGNATION.

※ SERVICE INFORMATION

「PRECAUTIONS」

A) ALL REPLACEMENT COMPONENTS IDENTIFIED BY ⚠ MUST BE REPLACED ONLY WITH ORIGINAL TYPE SPECIFIED BY THE MANUFACTURER AND INSTALLED AS THE ORIGINAL, WITH SPACERS AND POSITIONED AWAY FROM ADJACENT COMPONENTS WHERE APPLICABLE.

B) ALL SOLDERING MUST BE DONE IN A PROFESSIONAL MANNER USING SOLDER WITH RESIN CORE ONLY.

C) ALL COVERS, SHIELDS AND INSULATING SPACERS MUST BE REPLACED BEFORE RETURNING APPLIANCE TO CUSTOMER.

D) A DAMAGED POWER SUPPLY CORD MUST BE REPLACED BEFORE RETURNING APPLIANCE TO CUSTOMER.

E) A DIELECTRIC TEST CONSISTING OF 1080V AC 60HZ IS TO BE APPLIED BETWEEN BOTH BLADES OF THE POWER SUPPLY CORD ATTACHMENT PLUG AND THE EXPOSED CONDUCTIVE SURFACE OF THE APPLIANCE FOR A PERIOD OF NOT LESS THAN ONE SECOND BEFORE RETURNING APPLIANCE TO CUSTOMER.

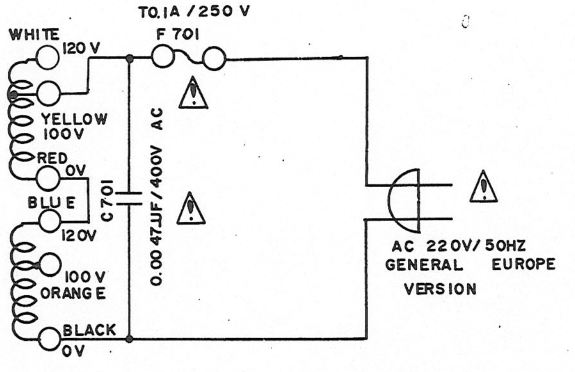
VR101L,R : PLAY BACK LEVEL ADJ
VR201L,R : REC LEVEL ADJ
VR301L,R : NOR BIAS ADJ
VR302 : CrO2 BIAS ADJ
VR303 : METAL BIAS ADJ

KTC1815 : Q103L,R Q201L,R Q202L,R
Q203L,R Q204L,R Q205L,R
Q303 Q206L,R

KTC 2240 : Q101 L,R Q102 L,R
A05 : Q301 Q304 Q305
KTA1015 : Q302

IN4148 : D201L,R D313 , D314
IN 4002 : D301 D302 D303 D304 D305 D306
RD24 EB4 : D307

REC TRAP : L201L,R L202L,R
INDUCTOR 4.5H : L203L,R
OSC COIL : L301
NE 6468 : IC201L,R
IC301
BA6137 : IC601L,R


T0.1A / 250 V
F 701
WHITE
120 V
YELLOW
100V
RED
0V
BLUE
120V
100 V
ORANGE
BLACK
0V
C701
0.0047μF/400V AC
AC 220V/50HZ GENERAL EUROPE VERSION